Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A color imaging apparatus comprising:

a solid-state image sensor having photosensors color-coded with three primary color filters formed like a matrix correspondingly to pixels of the solid-state image sensor, to provide three primary color signals acquired as captured image signals;

a four-channel signal detecting means for detecting, from the three primary color signals provided from the solid-state image sensor, an R signal acquired from R pixels in a horizontal line of R, G, R, G, ..., R and G color filters, a Gr signal acquired from the G pixels in the same horizontal line, a Gb signal acquired from G pixels in a horizontal line of G, B, G, B, ..., G and B color filters, and a B signal acquired from the B pixels in the same horizontal line;

a four-channel variable-gain amplifying means whose channels are controllable in gain independently of one another to amplify the R, Gr, Gb and B signals; and

a gain controlling means for controlling, based on an output from the signal detecting means, the gains of R and B channels of the variable-gain amplifying means so that the R and B signals amplified by the variable-gain amplifying means are equal in level for an achromatic color image, and said gain controlling means generating a mean value of the outputs of controlling the gains of Gr and Gb channels of the variable-gain amplifying means so that the amplitude difference between the luminance signal for the horizontal line of R, G, R, G, ..., R and G color filters produced from the R and Gr signal and the luminance signal for the horizontal line of G, B, G, B, ..., G and B color filters produced from the B and Gb signal is substantially

reduced.

2.   (Original) The apparatus as set forth in Claim 1, wherein the gain controlling means compensates, based on the output from the signal detecting means, the gains of the channels for the Gr and Gb signals with pre-calculated fixed compensation factors.

3.   (Original) The apparatus as set forth in Claim 1, wherein the gain controlling means detects, based on the output from the signal detecting means, an amplitude difference between the Gr and Gb signals, calculates compensation factors from the amplitude difference, and compensates the gains of the channels for the Gr and Gb signals with the compensation factors.

4.   (Original) The apparatus as set forth in Claim 1, wherein the solid-state image sensor is a CCD.

5.   (Original) The apparatus as set forth in Claim 1, wherein the captured image signal from the solid-state image sensor is extracted via a sample & hold circuit and AGC circuit, and then subjected to A/D conversion.

6.   (Currently Amended) A color imaging method comprising the steps of:

detecting, from the three primary color signals provided from the solid-state image sensor having photosensors color-coded with three primary color filters formed like a matrix correspondingly to pixels of the solid-state image sensor, an R signal acquired from R pixels in a horizontal line of R, G, R, G, ..., R and G color filters, a Gr signal acquired from the G pixels in

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the same horizontal line, a Gb signal acquired from G pixels in a horizontal line of G, B, G, B,

..., G and B color filters, and a B signal acquired from the B pixels in the same horizontal line;

amplifying the R, Gr, Gb and B signals by a four-channel variable-gain amplifying means

whose channels are controllable in gain independently of each other;

controlling, by a gain controlling means, based on an output from the signal detecting

means, the gains of R and B channels of the variable-gain amplifying means so that the R and B

signals amplified by the variable-gain amplifying means are equal in level for an achromatic

color image; and

generating a mean value of the outputs of ~~controlling the gains of~~ Gr and Gb channels of

the variable-gain amplifying means so that the amplitude difference between the luminance

signal for the horizontal line of R, G, R, G, ..., R and G color filters produced from the R and Gr

signal and the luminance signal for the horizontal line of G, B, G, B, ..., G and B color filters

produced from the B and Gb signal is substantially reduced.

7. (Original) The method as set forth in Claim 6, wherein at the gain controlling step

based on the output from the signal detecting means, the gains of the channels for the Gr and Gb

signals are compensated with pre-calculated fixed compensation factors.

8. (Original) The apparatus as set forth in Claim 6, wherein at the gain controlling step,

based on the output from the signal detecting means, an amplitude difference between the Gr and

Gb signals is detected, compensation factors are calculated from the amplitude difference, and

the gains of the channels for the Gr and Gb signals are compensated with the compensation

factors.

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9. (Original) The apparatus as set forth in Claim 6, wherein the solid-state image sensor is a CCD.

10. (Original) The apparatus as set forth in Claim 6, further comprising the step of extracting the captured image signal from the solid-state image sensor via a sample & hold circuit and AGC circuit, and then effecting A/D conversion of the captured image signal.